A1 species; the fifth column, percent identity to the human cDNA; and the sixth column, the nucleotide alignment (Nt_H) of the human and variant cDNAs.

IN THE CLAIMS

Please amend claim 1 as follows.

For the Examiner's convenience, all pending claims are listed below. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

1. (Once Amended) A purified protein comprising an amino acid sequence selected from the group consisting of:

a) an amino acid sequence of SEQ ID NO:4; and

b) an amino acid sequence having at least 95% sequence identity to SEQ ID NO:4.

2. An antigenic epitope of the protein of claim 1 comprising residues 550 through 565 of SEQ ID NO:4.

3. A biologically active portion of the protein of claim 1 consisting of residues 404 through 417 of SEQ ID NO:4.

4. A composition comprising the protein of claim 1 and a labeling moiety or a pharmaceutical carrier.

5. A method for using a protein to screen a plurality of molecules or compounds to identify at least one ligand, the method comprising:

a) combining the protein of claim 1 with the molecules or compounds under conditions to allow specific binding; and

b) detecting specific binding, thereby identifying a ligand which specifically binds the protein.

6. The method of claim 5 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, peptides, proteins, mimetics, agonists, antagonists, antibodies, immunoglobulins, inhibitors, and drugs.

7. A method of using a protein to prepare and purify a polyclonal antibody comprising:

a) immunizing a animal with the protein of claim 1 under conditions to elicit an antibody response;

b) isolating animal antibodies;

c) attaching the protein to a substrate;

d) contacting the substrate with isolated antibodies under conditions to allow specific binding to the protein;

e) dissociating the antibodies from the protein, thereby obtaining purified polyclonal antibodies.

8. A method of using a protein to prepare a monoclonal antibody comprising:

a) immunizing a animal with the protein of claim 1 under conditions to elicit an antibody response;

b) isolating antibody producing cells from the animal;

c) fusing the antibody producing cells with immortalized cells in culture to form monoclonal antibody producing hybridoma cells;

d) culturing the hybridoma cells; and

e) isolating from culture monoclonal antibodies which specifically bind the protein.

9. An agonist identified by the method of claim 6

10. A polyclonal antibody produced by the method of claim 7.

11. A monoclonal antibody produced by the method of claim 8.

12. A method for using an antibody to detect expression of a protein in a sample, the method comprising:

a) combining the polyclonal antibody of claim 10 with a sample under conditions which allow the formation of antibody:protein complexes; and

b) detecting complex formation, wherein complex formation indicates expression of the protein in the sample.

13. The method of claim 12 wherein complex formation is compared with standards and is diagnostic of cancer.

14. A method for using an antibody to detect expression of a protein in a sample, the method comprising:

a) combining the monoclonal antibody of claim 11 with a sample under conditions which allow the formation of antibody:protein complexes; and

b) detecting complex formation, wherein complex formation indicates expression of the protein in the sample.

15. The method of claim 14 wherein complex formation is compared with standards and is diagnostic of cancer.